Kayleigh Davies BSc (Hons) MSc,
Consultant Ecologist
Email: kayleighdavies@arbtech.co.uk
Arbtech Consulting Ltd
arbtech.co.uk

Preliminary Ecological Appraisal and Roost Assessment

Survey site:

Jerusalem Methodist Church, High Street, Johnstown, Wrexham, LL14 2AL

Client:

Mr R Price

Survey date:

19th August 2025

Project:

This report is prepared to inform a planning application with the Wrexham Council. The proposal is described as:

The conversion of onsite church to flats

PEA survey methodology and legislation can be found in the Arbtech Supplement: **PEA Methodology and Legislation - 2024.**

PRA survey methodology and legislation can be found in the Arbtech Supplement: **PRA Methodology and Legislation - 2024.**

The survey results and recommendations contained within this report are valid for 18 months. An updated site visit may be required if the report is to be used any longer than 18 months after completion

Site Location and Context

The survey site is centred on National Grid Reference SJ 30079 46108 and has an area of approximately ~0.1ha.

The site comprises a church with associated vegetated garden and hardstanding. It is situated within Johnstown in Wrexham. The site is located within the residential context of Johnstown, surrounding immediately by roads and residential homes. There is further residential homes to the north and east and south. Stryt Las Park lies ~160m west and then further residential homes lie to the west.

Survey Details

The site survey was undertaken by Kayleigh Davies BSc, MSc, Accredited on Natural England/Resources Wales Bat Licence (details on request.) and holder of Natural England/Resources Wales Level 1 Great Crested Newt License (details on request).

Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (mph)	Rain
19/08/2025	20	66	100	12	None

Executive Summary

- Precautionary working methods for hedgehogs, nesting birds and amphibians recommended.
- The site is located within close proximity to Johnstown Newt Sites; however the site itself is considered not suitable for great crested newts and therefore impacts to this species is considered suitably low.

Survey limitations

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.

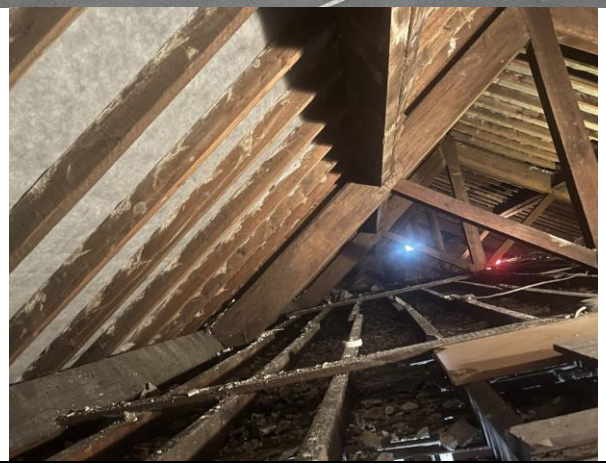
A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats present and the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report.

Ecological Survey Factor **Conclusion, Impact or Recommendations**	**Detailed using desk study and site survey (carried out under good weather conditions). Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.**
Habitats and plants (see habitat map in appendix 1, location plan in appendix 2, proposal plan in appendix 3 and photos in appendix 4). **Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).**	
Summary of Survey Findings	The site does not contain any habitats listed as a habitat of principal importance under 7 of the Environment (Wales) Act (2016). Other habitats within the site are common and widespread and have low ecological value. **On-site habitat descriptions** **u1b** – Developed land/sealed surface The majority of the site consists of cement hard standing driveway and pathways. The north of the site consists of rubble and cement. There are scattered flowerpots throughout the hardstanding to the east of B1. **u1 -** Built-up areas and gardens [introduced shrubs 847] There is a small section of sparse vegetated flower beds to the south of the site and a small strip of shrubs to the northern boundary of the site. The ground below these shrubs consists of bare ground, and the introduced shrubs are well managed and sparsely cover the bare ground. Species present include raspberry (*Rubus idaeus*) (D), common rose (*Rosa* spp.) (A), Lawson's cypress (*Chamaecyparis lawsoniana*) (F), box (*Buxus sempervirens*) (F), pine (*Pinus* spp.) (O) and anemone (*Anemone* spp.) (R), with scattered young pear (*Pyrus communis*) and apple (*Malus domestica*) trees to the northern boundary that have been recently planted. **u1b5** – Buildings There is one building on site discussed in the bat roost assessment section of the report. Scattered trees 32 There is one holly (*Ilex aquifolium*) tree (T1) to the south of the site. The tree is semi-mature, with a DBH of ~30 cm. The tree is in good condition with no signs of damage or disease. **Local notable habitats**

	• Local notable habitats within 2km of the site are unknown without biological record data from COFNOD.
Foreseen Impacts	**On-site habitats** The proposed development will not result in the loss of habitats. The change of use of the site likely to have a minimal impact on biodiversity due to the low ecological value of these habitats. **Notable habitats** No direct impacts to any notable habitats will occur as a result of the proposed development. However, due to the proximity of unknown notable habitats, indirect effects (e.g. pollution, dust, litter, surface run off, etc.) could occur during construction.
Recommendations	**On-site habitats** Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012). **Notable habitats** Best practice measures to minimise the possibility of pollution affecting the nearby ancient woodland must be implemented during construction. **Green Infrastructure Assessment** Planning Policy Wales (2024) requires all developments within Wales to conduct a Green Infrastructure Assessment to deliver Net Biodiversity Benefit and maintain biodiversity during development. Therefore, the planning application must be accompanied by a Green Infrastructure Statement to detail how the site is maintaining biodiversity and include recommendations to further enhance the site biodiversity.
Locality and Designated Sites	
Summary of Survey Findings	**On-site designations** The site is not subject to any designation. **Statutory designated sites (within 2km)** There are 2 statutory sites within 2km of the site, as detailed below: • Johnstown Newt Site (SAC– Special Area of Conservation) – ~120m west and ~660m east - designated for great crested newts.

	• Stryt Las a'r Hafod (SSSI -Site of Special Scientific Interest) - ~120m west and ~660m east - *Stryt Las a Hafod is a composite site located close to the village of Johnstown, southwest of Wrexham, at an altitude of 130m. It is of special interest for its amphibians. Of particular interest is the population of the great crested newt Triturus cristatus.* **Non-statutory designated sites** The presence of non-statutory designated sites within 2km of the site cannot be established without data from COFNOD.
Foreseen Impacts	**On-site designations** No impacts foreseen. **Statutory and non-statutory designated sites** No direct impacts to any designated sites will occur as a result of the proposed development. However, due to the proximity of the site to Johnstown Newt Site (SAC) and Stryt Las a'r Hafod (SSSI) and the possible presence of non-statutory designations in the vicinity, indirect effects such as pollution could occur during construction.
Recommendations	**On-site designations** None required. **Statutory and non-statutory designated sites** Best practice measures to minimise the possibility of pollution affecting the nearby Johnstown Newt Site (SAC) and Stryt Las a'r Hafod (SSSI) must be implemented during construction. A Construction Environment Management Plan (CEMP) may be required for this.
Invasive / Non-native species	
Summary of Survey Findings	No problematic invasive and non-native species recorded on site.
Foreseen Impacts	N/A
Recommendations	No further surveys but remain vigilant.
Invertebrates	

Summary of Survey Findings	The habitats present on-site, including ornamental shrubs and tree, likely provide common invertebrates with opportunities to forage and shelter. The site contains no further notable habitats which may provide niches for specialised or protected invertebrates.
Foreseen Impacts	None foreseen.
Recommendations	No further surveys. **Suggested biodiversity enhancements** Insect hotels, log piles or deadwood will further enhance the site for invertebrates. The site could be further enhanced via the provision of native wildflowers or wildflower turf, which would provide foraging opportunities for invertebrates.
Bats	
Summary of Survey Findings	**EPSL data** Records of bats within 2km are unknown without Biological Record Data from COFNOD. **Foraging and commuting habitat** Habitats recorded on site are assessed to provide poor foraging and commuting opportunities for bats in the form of small section of introduced shrubbery and a single tree. however the nearby Stryt Las Park offers high value for foraging and commuting bats. However the site lies within the urban context of Johnstown and is surrounded by artificial lighting which is likely to deter the bats from utilising this site. **Roosting habitat** Buildings and trees to be impacted by the proposed development are assessed for their suitability to support roosting bats below. There is 1 building on site: the main church (B1). There is one tree onsite, and this is considered negligible for roosting bats due to the lack of features on the tree and the young age of the tree.

B1 Building description	***Photographs***
Summary B1 is a single storey building, with brick constructed walls and a slate roof. The eaves are wooden, and the windows are new UVPC windows with concrete sills, which are well sealed with no observed cracks or crevices. The roof on B1 is new, with the roof replaced in May of this year. Therefore, the roof is well sealed, with no observed cracks or crevices. The loft is in good condition with the lining well sealed with no damage observed. No points of ingress noted into the loft or the roof space for void or crevice dwelling bats. B1 is **negligible** for roosting bats.	 

Foreseen Impacts	**Roosting habitat [Buildings]** Bats are very unlikely to be roosting within this building and as such, there are not anticipated to be any impacts on bats in this location as a result of the proposed development. **Roosting habitat [Trees]** T1 will be retained and no impacts to roosting bats are anticipated.

	Foraging and commuting habitat The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats. However, the proposed development will include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas. **Artificial lighting** The proposed development may lead to an increase in the amount of current lighting of surrounding habitats or the retained building without mitigation. This may disturb commuting bats.
Recommendations	**Roosting habitat [Buildings]** In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop, and a bat licensed ecologist contacted for further advice. **Roosting habitat [Trees]** No further surveys required. **Foraging and commuting habitat** No further surveys are required. **Artificial lighting** A low impact lighting strategy will be adopted for the site during post-development which outlines the areas of the site that will be retained as dark corridors. Parameters can be found on the Bat Conservation Trust website: https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting-2 **Suggested biodiversity enhancements** The installation of one bat box at the site will provide additional roosting habitat for bats. The bat boxes will be incorporated into the building. They will be suitable for pipistrelles (which have been identified locally through EPSL data). Suitable bat boxes include Habibat Bat Box, Ibstock Enclosed Bat Box or similar alternative brand. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light.

Birds	
Summary of Survey Findings	**Buildings** No evidence of nesting birds was identified on or within B1. B1 is deemed to provide negligible habitat value for nesting birds due to a lack of suitable nesting sites or access points. **Trees and vegetation** No bird nests were identified within the vegetation on-site; however they all offer nesting opportunities and nest-building resources for birds. **Barn owls** The site does not appear to provide any suitable nesting sites for barn owls. **Overwintering birds** Due to the small size of the site and the extent and type of the habitats recorded, the site not considered suitable to support a significant assemblage of protected and/or notable birds.
Foreseen Impacts	**Trees** The proposed development could result in the disturbance and subsequent abandonment of active bird nests. **Barn owls** None foreseen. **Overwintering birds** None foreseen.
Recommendations	**Trees** Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works. At least a 3-5m buffer should be created between any machinery and active nests until the young have fledged. **Barn owls** None required.

	Overwintering birds None required. **Suggested biodiversity enhancements** The installation of a minimum of two bird boxes on the building will provide additional nesting habitat for birds e.g. Schwegler No 17 Swift Nest Box (buildings) Schwegler 1SP Sparrow Terrace (buildings) Or a similar alternative brand. Swift and sparrow boxes should be positioned at the eaves of a building and can be incorporated into the fabric of the building during construction.
Reptiles	
Summary of Survey Findings	**Habitat suitability** There is no suitable habitat present on site for reptiles due to a lack of habitats such as scrub and rank grassland which would offer refuge for these species. Further, the site is surrounded by urban development (i.e. roads and buildings) which is considered sub-optimal for reptile migration and therefore reptiles are considered unlikely to migrate from any nearby suitable habitats to the development site. As such it is likely that reptiles are absent from the development site. **Wider landscape** The adjacent sections of the Stryt Las Park and woodland are of elevated ecological value within the wider landscape and may represent important resources for local reptile populations. However, a road and several residential gardens lie between the site and this park, although not considered fully disconnected, it is unlikely reptiles will commute to site.
Foreseen Impacts	The shrubs onsite are to be retained, the hardstanding will be impacted, and this is considered to have no impact on reptiles due to the habitat not being suitable for reptiles. However, taking into account the high value of the nearby SSSI, there is a low risk of reptiles in the surrounding areas of the site.
Recommendations	A precautionary working method will be implemented for widespread reptiles during construction, including the following measures: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • Best practice pollution prevention measures will be implemented to minimise impacts to nearby habitats. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.

	• If any reptiles are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. • In the unlikely event that a reptile is identified, works must cease and advise must be sought from a suitably qualified ecologist. **Suggested biodiversity enhancements** The site could be enhanced for reptiles post-development with the inclusion of log piles (created from felled materials) and planting of areas of native shrubs, to provide sheltering opportunities.
Amphibians	
Summary of Survey Findings	**Aquatic habitat suitability (including ponds within 500m)** Great crested newts (GCN) exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton et al. 2001). A review of the Magic.gov.uk database and aerial imagery indicates that there four ponds located within 500m of the site, located ~165m west, ~170m west, ~185m northwest, ~230m southwest all within Johnstown Newt Sites (SAC) and Stryt Las a'r Hafod (SSSI). All four ponds have potential terrestrial connectivity to the site due to an absence of definitive barriers to dispersal. However, all other ponds are assessed to have limited connectivity due to separation by areas of suboptimal habitat including intensely managed residential gardens in addition to tarmac roads and pavements. A pond map showing approximate pond locations is provided in Appendix 1B. **Terrestrial habitat suitability** The site provides very limited suitable terrestrial habitat for amphibians given the lack of optimal habitat (i.e. scrub, rank grassland). The areas of hard standing and sparse introduced shrub offer sub-optimal habitat for terrestrial amphibians therefore if this species is present onsite, would only spend short periods of time on site due to limited shelter and foraging opportunities. Furthermore, given the immediate surrounding urban nature of the surrounding landscape (i.e. dominated by roads and hard standing which are sub-optimal for amphibians) it is unlikely that amphibians will migrate on to site. Further, there is limited suitable terrestrial habitat across the continued wider landscape reducing the likelihood of amphibians being present on site and across the immediate surrounding areas.
Foreseen Impacts	Given the lack of suitable terrestrial habitat onsite for amphibians the presence of GCN on-site is considered suitably low and therefore impacts to amphibians as a result of the proposed development are deemed to be acceptably low. Furthermore, the proposed development is to impact current hardstanding surface, with shrubs onsite to remain.

Recommendations	Owing to the nature of the proposed development and therefore low potential for impacts to great crested newts, further surveys are considered to be disproportionate. A precautionary working method will be implemented for common amphibians during construction, including the following measures: • A staged approach will be adopted for vegetation clearance, whereby the vegetation will be strimmed to 15cm and left overnight to allow any amphibians to disperse. The vegetation can then be cleared to ground level and must be maintained at this level for the duration of construction to deter amphibians from the working area. • Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or removed from the site to prevent amphibians from utilising these areas. • Best practice pollution prevention measures will be implemented to minimise impacts to nearby aquatic habitats that amphibians could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any common amphibians are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. • In the unlikely event that a great crested newt is identified, works must cease and advise must be sought from a suitably qualified ecologist. **Suggested biodiversity enhancements** The site could be enhanced for amphibians post-development through creation of amphibian hibernacula using rubble and logs from site clearance. Information on how to construct a hibernaculum can be found here: https://www.wiltshirewildlife.org/hibernaculum
Badger	
Summary of Survey Findings	No badger setts were noted on site or within a 30m radius of the site. The site is considered unsuitable for badgers given the lack of suitable sett excavation areas/ground. Further, there is limited suitable badger foraging habitat on site given the lack of fruiting trees/scrub. The site is also surrounding by urban development (i.e. roads and buildings), which is sub-optimal habitat therefore reducing the likelihood of badgers being present within the surrounding area of the site.
Foreseen Impacts	No impacts are anticipated on badgers as a result of the proposed development.
Recommendations	None required.

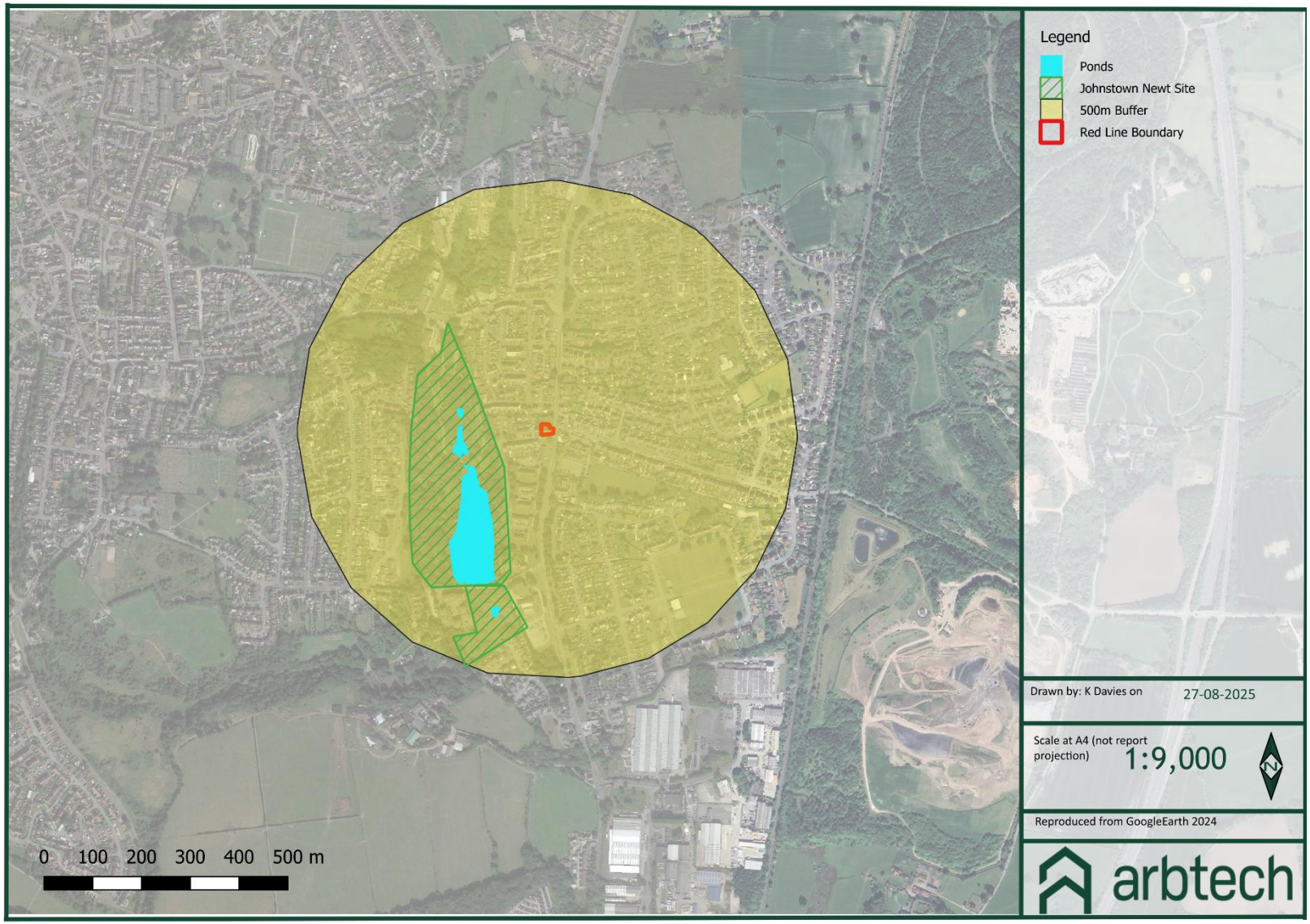
Riparian animals	
Summary of Survey Findings	A review of the MAGIC database returned no granted EPSL records for otters or water voles within 2km of the site. There are no water courses on or connected to the site. There are also no riparian habitats present on site or within an influencing distance.
Foreseen Impacts	No impacts are anticipated on riparian animals as a result of the proposed development.
Recommendations	None required.
Hazel dormouse	
Summary of Survey Findings	**Habitat suitability** Dormice typically utilise a three-dimensional habitat structure as to commute between feeding and breeding sites whilst avoiding predation. As such habitats on site are considered unsuitable for hazel dormice and therefore the likelihood of this species being present on site is considered acceptably low.
Foreseen Impacts	No impacts are anticipated on hazel dormice as a result of the proposed development.
Recommendations	None foreseen.
Other e.g. hedgehog	
Summary of Survey Findings	The shrubs onsite provides limited foraging and commuting opportunities for hedgehogs, with woodland habitat nearby.
Foreseen Impacts	No habitats are to be removed for the proposed development, however, construction activities could result in the death or injury of hedgehogs, if present.
Recommendations	A precautionary working method will be implemented during construction, including the following measures: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance.

	Suggested biodiversity enhancements The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs: • Planting species-rich grassland to increase foraging opportunities. • Creation of brash piles or installation of hedgehog houses in shady areas. • Installation of gaps under boundary fencing to enable hedgehogs to move freely through the site.

Appendix 1a: PEA Map



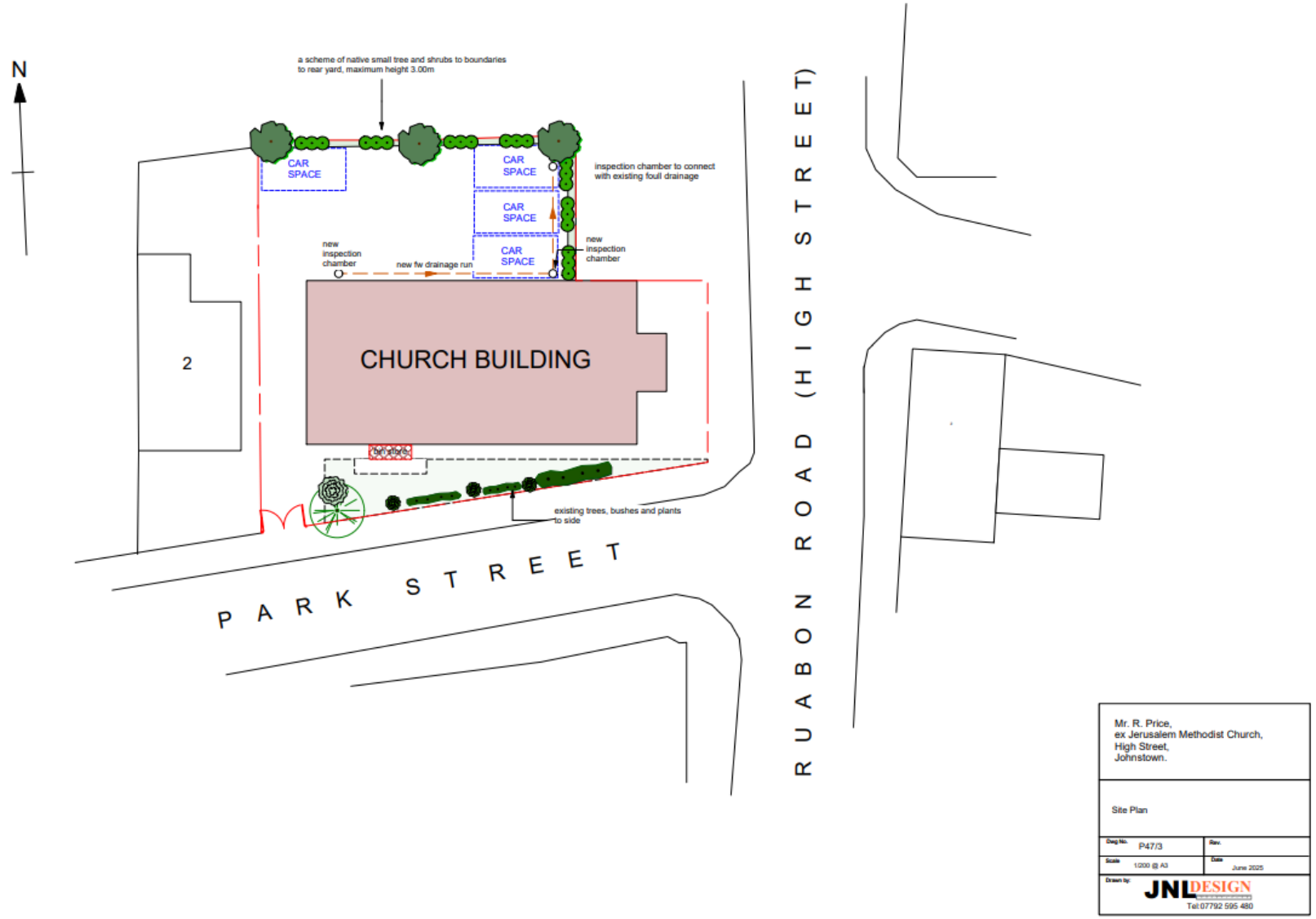
Appendix 1b: Pond map



Appendix 2: Location map



Appendix 3: Proposed plan



Appendix 4: Habitat Photos

Developed Land Sealed Surface	
Photograph	**Description**
	Fig 1 – the hardstanding to the west of B1.
Introduced shrubs	
Photograph	**Description**
	Fig 2 – the introduced shrubs to the north of B1.
Scattered trees	
Photograph	**Description**

	Fig 3 – T1 to the south of B1.

Limitations and Copyright

Legal

Arbtech Consulting Limited has prepared this report for the sole use of the above-named client or their agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The conclusions and recommendations contained in this report are based upon information provided by third parties. Information obtained from third parties has not been independently verified by Arbtech Consulting Limited.

© This report is the copyright of Arbtech Consulting Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.

Version control			
Status	**Issue**	**Name**	**Date**
Draft	0.1	Kayleigh Davies, BSc (Hons), MSc, Consultant Ecologist	27/08/25
Final	1.0	Kayleigh Davies, BSc (Hons), MSc, Consultant Ecologist	27/08/25